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~~Lid applied by pressure to cans containing drinks~~

The invention concerns packaging of drinks in cans.

Cans containing drinks that can be drunk through an aperture made in the top surface of the can are in everyday use, the aperture being created by pulling off a strip prepared for the purpose, and by application of a ring fixed by a pin at the rear end of said strip, which ring, before being pulled up, lies flat on said top surface of the can.

The serious drawback connected with these cans is that there is nothing to protect the surface from dirt liable to accumulate during storage and transport.

Further, once open, there is no real way of closing the can which may mean loss or, in any case deterioration, of any liquid not immediately drunk after opening the can.

The invention here described solves both these problems, that of dirt accumulating on the top surface and that of preserving the quality of the drink to be consumed later, as will now be explained.

Subject of the invention is a lid applied by pressure to a can for drinks having a cylindrical body and truncated cone-shaped mouth at the closed top of a head round which is a raised edge, and an aperture which can be formed by pulling off a tongue-shaped strip. The shape and internal dimensions of said lid correspond to the

shape and external dimensions of the top of the can to allow substantially reciprocal matching between the lid's truncated cone-shaped body and cylindrical mouth and the truncated cone-shaped mouth and cylindrical body of the can.

- 5 The base of said lid is concave presenting an external raised rim of a substantially U-shaped cross section, said rim matching with the raised edge round the upper surface of the can.

The height of the internal wall of the rim round the lid is substantially the same as that of the raised edge on the upper surface of the
10 can.

The cylindrical mouth in the lid extends to match, for a few millimetres, with the cylindrical body of the can.

There is a protruberance on the base of the lid, shaped substantially like the aperture in the opened can, and slightly larger

- 15 On applying the lid to the can so that the position of the protruberance corresponds radially to said aperture, said protruberance can therefore be pressed down inside the aperture, like a stopper, closing the can hermetically, avoiding any spillage of liquid, if not entirely drunk, and keeping the remainder unaltered for later
20 consumption by simply removing the lid each time.

At the beginning and end of the truncated cone-shaped body of the lid are two annular sealing ribs that match with the beginning and end of the lid's truncated cone-shaped mouth.

- Two vent holes (46, 47) are made in the lid substantially in the
25 centre of its concave base and at the position of its truncated cone-shaped body between the two annular ribs.

- A handle is situated on the outside of the lid, substantially at the meeting point between its truncated cone-shaped body and the cylindrical mouth; before use, this handle faces towards the top of
30 the lid, lying flat against said lid's body, from where it can be easily rotated outwards for pulling the lid to detach it from the can.

Two lateral notches are cut into the handle about halfway along it, the transversal size of the handle being such that, when slightly bent longitudinally, it enters the aperture in the can, after all its contents have been drunk, until the edge of the aperture enters the notches fixing can and lid together to prevent them from falling apart and polluting the environment.

In one type of execution lid height is between 8 and 25 mm.

The lid is preferably made in one piece and of moderately elastic material which may be plastic, rubber or some equivalent.

10 The invention offers evident advantages.

The top of the can is protected against pollution by means of a light and practically bulkless lid of negligible cost, the aperture for consumption of the drink being made in the top of the can by pulling off the tongue-shaped strip.

15 As the top of the can has a practically hermetic seal, the lid prevents pollution through accumulation of dirt and dust which, on opening the can, could fall into the drink making it unhealthy.

The presence of the lateral handle makes lifting the lid off in order to reach the contents an extremely simple and natural gesture.

20 As the lid can be put on again each time a drink is taken, any quantity left in the can is safe from pollution and its original high quality is fully maintained.

To sum up these advantages, a simple means of negligible cost not only protects the drink against pollution but also ensures that its full flavour and other characteristics remain unimpaired.

Characteristics and purposes of the disclosure will be made still clearer by the following examples of its execution illustrated by diagrammatically drawn figures.

Fig. 1 A can to be opened by pulling off a tongue-shaped strip, seen closed, with the lid on, perspective view.

Fig. 2 As above, a longitudinal section.

Fig. 3 The can without lid, seen from above.

Fig. 4 A can being opened by pulling off the tongue, when the lid is being pressed on.

Fig. 5 Longitudinal section of the lid, with detail.

5 Fig. 6 The lid seen from inside.

Fig. 7 The can when open, with the lid on, longitudinal section.

Fig. 8 As in Fig 7, seen from above.

Fig. 9 The can open, with the handle of the lid fitted into the aperture, after emptying.

10 The can 10, of a well-known type, comprises the body 11 with (Figs 2, 4) the truncated cone-shaped mouth 12 and cylindrical rim 13.

This mouth is closed by the head 15 with U-shaped edge 16.

On the convex body of the head a tongue-shaped strip 19 is made by a prepared tear-off surround 22, to the end of which a pin 21
15 fixes the trapezoidal ring-shaped handle 20.

The shape of the protective lid 30, of plastic material is substantially that of the top of the can, and comprises a cylindrical mouth 32 that connects, by means of the truncated cone-shaped body 33, with a convex base 31 through the raised U-shaped edge 34 whose
20 internal channel 35 fits over the rim 16 of the can.

On the base 31 of the lid, at a position radially corresponding to that of the aperture 23 created in the head 15 by pulling off the tongue 19, there is a protruberance 45 whose shape corresponds to that of said aperture 23, so that on fitting the lid over the opened can
25 (figures 7, 8) said protruberance acts as a stopper (see also Fig.9).

It is clear from the foregoing that the lid 30 (Figs. 1 and 2) provides a hygienic protection to the top of the can 10, preventing the accumulation of dirt thereon during storage and transport.

Protection is also ensured by the fact that, as clearly seen in
30 Figures 5 and 7, there are two annular ribs on the lid, 48 and 49, placed respectively between the cylindrical mouth 32 and the

truncated cone-shaped body 33 that connect with the base 31 and adhere to the can 10 at the position of its truncated cone-shaped mouth 12.

These annular ribs create what is substantially a hermetic chamber comprising two vent holes, hole 46 at the centre of the base 31 of the lid, and hole 47 on the truncated cone-shaped body 33.

To detach the lid 30 from the can when about to be opened, a handle 40 is fixed to said lid 30 at the point between the truncated cone-shaped body 33 and the cylindrical mouth 32, said handle having in it (Figs 1, 8) a central aperture 41 and notches 43 in the edges of its sides 42.

To facilitate pulling the handle which, prior to use, lies flat against the truncated cone-shaped body 33 of the lid, said handle can be rotated outwards as shown in Figures 4, 7, 8.

If the drink has not been finished, the remaining quantity 28 can be protected by pressing the lid back on as seen in Figures 4, 7 and 8. The lid adheres closely to the top of the can both on account of its shape and because of the presence of the ribs 48, 49.

Forced penetration of the stopper 45 inside the aperture 23 in the head 15 of the can, not only keeps the drink clean but also prevents accidental spillage until the whole quantity has been consumed.

On consuming the contents 28 of the can, after longitudinally bending the handle and forcing it inside the aperture 23 in the head of the can (Fig. 9), the edges of said aperture 23 can penetrate inside the notches 43 (Fig 9), so forming a stable connection between can and lid and preventing the latter from becoming an item of polluting waste if dropped on the ground.

As the above invention has been described and explained as one example only and to show its essential features, many variations may be made to it according to industrial, commercial and other requirements, or be included in other systems and means without

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